

DRINKING WATER QUALITY PROGRAM

Early Implementation Actions

DESCRIPTION	DETAILS	GEOGRAPHIC AREA	INDICATORS OF SUCCESS
Veale Tract drainage discharge relocation feasibility study and environmental documentation	Several agricultural discharges from Veale Tract considerably increase salinity and organic matter. Environmental documentation for relocation or treatment of the drains is proposed.	South Delta, Veale Tract, and Old River	Reduced levels of total organic carbon (TOC), pathogens, and nutrients in Contra Costa Water District (CCWD) intake at Rock Slough
Feasibility study: Management, relocation, and/or treatment of Reclamation District (RD) 800 drain discharge	Urban and agricultural discharges in the RD 800 area may affect south Delta exports for drinking water. Impacts need to be managed.	South Delta, Discovery Bay, and the proposed Mountain House community	Implementation of watershed best management practices (BMPs) to prevent input of nutrients, pathogens, and TOC
Elimination of discharges of waste from watercraft in the Delta and tributaries	Certain laws currently allow discharges from watercraft, both recreational and commercial. Laws also allow the State to prohibit such discharges.	Bay and Delta	Elimination of nutrient and pathogen loading from watercraft
Barker Slough watershed restoration	The Barker Slough watershed contributes organic material to the North Bay Aqueduct (NBA) that, after treatment, produces DBPs. Watershed restoration is aimed at eliminating a majority of the organic carbon.	Barker Slough watershed	Reduced levels of TOC, pathogens, and nutrients in the NBA intake
Assessment of sources and magnitudes of loadings of constituents of concern for drinking water	A comprehensive, perpetual, and evolving study of loads of specific drinking water constituents of concern that are discharged, either by point sources or nonpoint sources to the Delta.	The entire Delta and tributaries, as necessary for problem definition and resolution	Reduced levels of TOC, pathogen, and nutrients
Evaluation of TOC	Source identification of TOC and pilot testing of treatment methods on agricultural drain water from Delta islands.	Delta island drains and lower river drains	Reduced levels of TOC that reach the intakes at pumping stations
Convene a Delta Drinking Water Council in a public forum to consider relevant technical data and inform the governing entity in its consideration of solutions to identified public health issues for urban users of Delta water (Years 1-7).	In furtherance of CALFED's drinking water quality objective to continuously improve source water quality that allows for municipal water suppliers to deliver safe, reliable, and affordable drinking water, the Delta Drinking Water Council (Council) will be formed as a standing subcommittee of BDAC.	The Bay Delta and its tributaries	Continuous improvement of source water quality

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Stage 1 Actions

STAGE 1 ACTIONS	DETAILS	GEOGRAPHIC AREA	INDICATORS OF SUCCESS
1. Prepare project-level environmental documentation and permitting as needed (Years 1-7).	The continuous process of developing and managing the Water Quality Program.	Bay-Delta solution area	
2. Coordinate with other Program elements to ensure that in-Delta modifications maximize the potential for Delta water quality improvements (Years 1-7).	Ongoing coordination and integration.	All areas	
3. Continue to clarify the use of and fine tune water quality performance targets and goals (Years 1-7).	Receive input and incorporate recommendations as results from studies and actions become available.	All areas	
12. Perform other actions specific to drinking water improvements:	Drinking water protection is complex. Much of the proposed actions are associated with source water protection, while some focus on treatment technology and health studies. Protecting drinking water quality likely will require significant success in many of the proposed actions.	Entire water-shed and Bay-Delta	Reduced drinking water contaminants of concern sufficient to meet state and federal drinking water concentrations
• Control TOC contribution through control of algae, aquatic weeds, agricultural runoff, and watershed improvement (Years 1-7).	Individual actions throughout the Bay-Delta to reduce TOC to appropriate levels.		
• Study brominated and chlorinated DBP operational controls at water treatment plants and implement incremental improvements as warranted (Years 1-7).	Determine how much operational control can affect DBP production and encourage implementation of optimum operational procedures at individual treatment plant.		
• Control pathogens through control of cattle, urban stormwater, sewage, boat discharge, and possibly recreational swimming; includes various projects depending on the area of impact (Years 3-7).	Pathogens from human and animal sources need to be reduced in source waters. Most control mechanisms are going to be educational and operational in nature. The objective is to reduce pathogens while preserving other beneficial uses such as recreation and agriculture.	Lakes, reservoirs, bays and estuaries within the Bay-Delta	Reduced Pathogens in supply water
• Study impacts on recreational swimming impacts and impacts from wild animals (Year 4).			
• Relocate Barker Slough intake (Years 7+).	Relocation of the Barker Slough intake would be considered if management practices in the watershed did not prove to be sufficiently effective at removing TOC, nutrients and pathogens.	Barker Slough area	Reduced TOC, Nutrients and pathogens in Barker Slough supply water

STAGE 1 ACTIONS	DETAILS	GEOGRAPHIC AREA	INDICATORS OF SUCCESS
<i>Action 12 (cont.)</i>			
<ul style="list-style-type: none"> Reduce methyl tert-butyl ether (MTBE) in various areas (Years 3-5). 	The gasoline additive MTBE accumulates in lakes, but is being phased out. No action necessary.		
<ul style="list-style-type: none"> Address water quality problems in terminal reservoirs (Years 3-5). 	Reduce algae, pathogens, and other water quality problems in the terminal reservoirs.	Terminal reservoirs	Meet all drinking water standards
<ul style="list-style-type: none"> Perform public health effects studies, as needed, to more specifically identify the potential health effects of bromide-related DBPs (Years 1-3). 	A detailed analysis of health effects are needed to determine source water conditions required for health needs	Entire Bay-Delta	Numerical Targets in source water
<ul style="list-style-type: none"> Investigate alternative sources and means of providing high-quality water supply for urban users of Delta water (Years 1-7). 	Alternative sources of water may exist for blending purposes to improve drinking water quality and enhance reuse options	Entire Bay-Delta	
<ul style="list-style-type: none"> Investigate, as needed, advanced treatment technologies for the removal of salt, bromide, TOC, and pathogens from urban water supplies (Years 1-7). 	This is the study of specific treatment techniques and the combination of techniques to minimize development of DBPs	Entire Bay-Delta and service areas	
<ul style="list-style-type: none"> Investigate combinations of new supplies and technologies that can minimize salt content of urban water supplies and provide greater public health protection (Years 1-7). 	This is a combination of the two above tasks.	Entire Bay-Delta and service areas	Meet all drinking water standards and enhance reuse of wastewater
<ul style="list-style-type: none"> Develop a plan sufficient to meet forthcoming U.S. Environmental Protection Agency and Department of Health Services standards for brominated DBPs (by Year 7). 			